EXHIBIT A

SLOAN VALVE COMPANY
10500 Seymour Avenue
Franklin Park, IL 60131-1259

NEW CONCEPT DISCLOSURE

Project No.: NP99145

Case No.:

SLOAN NEW CONCEPT DISCLOSURE

SLOAN VALVE COMPANY

FRANKLIN PARK, ILLINOIS 60131

Case No.:	Date Received:	Received By: Peter Jahrling

I. Invention Title: Remote Radio 2-way Communicating Sensors And Actuators For Control Of Water.

II. Inventor (s)

A.	Name: Jerome M. Gauthier	Signature: Jerome M. Gauthier	
	Street Address: 510 Glenmore Place		
	City: Roselle	State: IL	Zip: 60172
	Title: Engineer	Department: Design Engineering	
	Supervisor: Peter Jahrling	Date:	

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B.	Name: Nhon T. Vuong	Signature: Nhon T. Vuong	
	Street Address: 2061 Queensbury Court		
	City: Lombard	State: IL	Zip: 60148
	Title: Engineer	Department: Research And Development	
	Supervisor: Peter Jahrling	Date:	

C.	Name:	Signature:	
	Street Address:		
	City:	State:	Zip:
	Title:	Department:	
	Supervisor:	Date:	

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	Patent Review Board Decision	☐ Accept	☐ Decline

Comments:

Reviewed By: Charles S Cole Date:

III The objective of the invention.

A. What does it accomplish?

1) This invention removes the physical connection of a sensor to an actuator by such means as a piece of wire, common control board, etc.

2) This invention allows more freedom of placement of the sensor and actuator.

3) This invention allows for one or more sensors to request an activation of an actuator if desired.

4) This invention allows for one or more actuators to be activated by a sensor, if desired.

5) The sensor type is independent of the actuator type.

6) A mixture of sensor types can request an actuation from the same actuator.

7) Makes installation easier.

8) Built in acknowledgment of communication signal via indicator lamp.

B. What is its purpose?

1) The purpose of this invention is to remove the physical connection of a sensor to an actuator, such as piece of wire, common control board, etc.

2) Another purpose of this invention is to allow more freedom of placement of the sensor and actuator.

3) The indicator lamps will help with maintenance trouble shooting of the sensor and valve activators while in the field.

C. Why is it unique?

1) This invention is unique because there is no physical connection between the sensor and the actuator.

2) The communication between the sensor and actuator can occur through walls, without the need of cutting a hole in the wall.

3) The invention allows the actuator to be placed anywhere within communication distance of the sensor.

D. Circumstances which led to idea?

In the plumbing industry, valves must be close to the fixture so the user can actuate an activating mechanism, such as a push button or electronic device. In cases where a valve is placed behind a wall, a hole must be made in order to connect to the sensor element, push button or electronic device.

IV. The objective of the invention.... What does it accomplish?

A. Sketch showing the concept:

1) See attached document titled: 2-Way Wireless Radio Sensor, Radio Receiver For Water Control.

Inventor: Jerome M. Matthias	Date
Inventor: Nhon T. Vuong	Date
Inventor:	Date:
Witnessed & Understood:	Date:
Witnessed & Understood:	Date:

☐ B. Attach photocopies of "original" sketches and/or description. Be sure signatures of inventor (s) and witnesses are provided.

SLOAN NEW CONCEPT DISCLOSURE

V.	Invention status		
A.	Date invention was conceived:		
B.	Date first sketch or drawing made:		
C.	Has it been constructed?	YES	
D.	Has it been tested?	YES	
E.	Has it been used experimentally?	NO	
F.	Has it been put into production?	NO	
G.	Has it been sold as a product?	NO	
H.	Reference Sloan Project File Number	NP99145	

Note: Attach photocopies of all supporting documents that would establish the above dates such as; invoices, memos, letters, drawings, test results, work orders, purchase orders, etc.

VI. List any anticipated problems

1) Cannot communicate through grounded ferrous metals.
   a) Possible work around with radio repeaters.
2) Multiple sensors transmitting at the same may corrupt the radio signal.
3) Other radio sources may corrupt the radio signal.
4) Relatively short transmission and receive range limit.
   a) Possible work around with radio repeaters.

VII. Why do you believe it is better than current device or process?

Explain:

1) This invention allows the valve to be placed independent of where the sensor is located.

2) Installation is made easier; no holes have to be punched through the wall.

3) The sensor can be placed as desired.

4) There is more flexibility with regard to sensor choices for a valve.
You can mix and match a sensor type to a valve actuator.

5) This invention incorporates diagnostic and conformation of the signal being received by the actuator via the indicator lamp on the sensor.

VIII. Provide any information available on similar devices or processes (prior art).

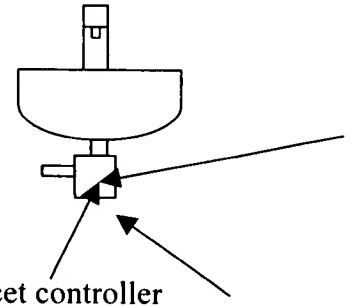
2-Way Wireless
Radio sensor, Radio Receiver
For Water Control

Date:

Inventors: Jerome M. Gauthier
Nhon Vuong

Written By: Jerome M. Gauthier

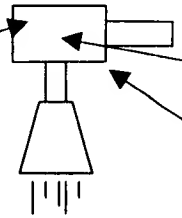
Components to be used:



Faucet controller

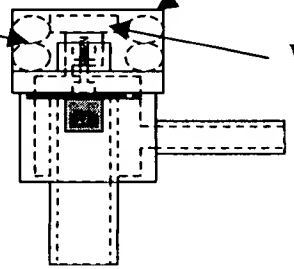
Can be battery powered and/or hard wired.

Radio Receiver/Transmitter.
When the correct address is received,
A) the electronics will activate the solenoid to allow water flow out of the faucet and
B) transmits a different address to acknowledge the command.



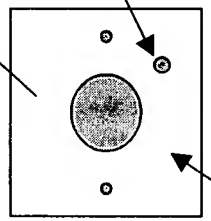
Shower controller

Can be battery powered and/or hard wired.



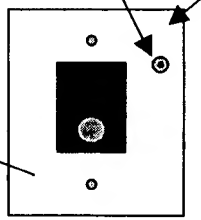
Water closet controller

Radio transmitter/receiver, when button is pressed, an address is transmitted.
If a correct address is received an indicator lamp will turn on.

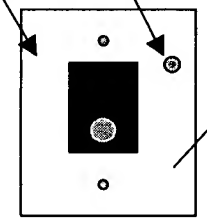


Indicator lamp

Can be battery powered and/or hard wired.



Indicator lamp



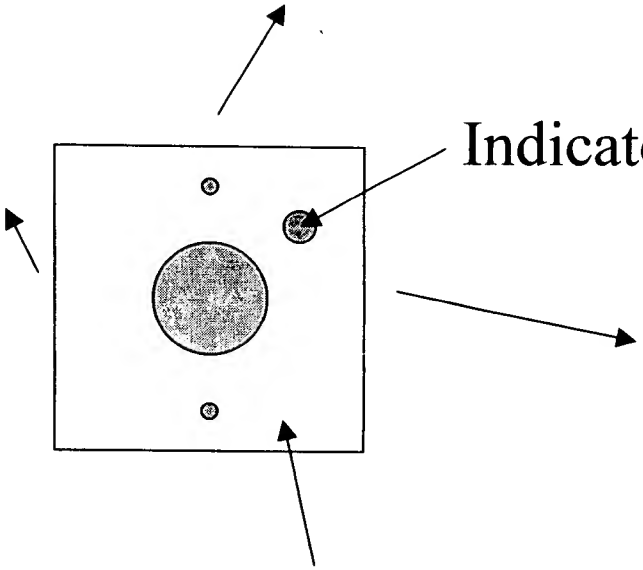
Indicator lamp

Infrared sensor with Radio transmitter/receiver, For faucets and showers. When a valid target is detected an address is transmitted. Indicator lamp will turn on if a correct address is received.

Infrared sensor with Radio transmitter/receiver.
For water closets, when a valid target is detected and the target leaves, an address is transmitted. Indicator lamp will turn on if a correct address is received.

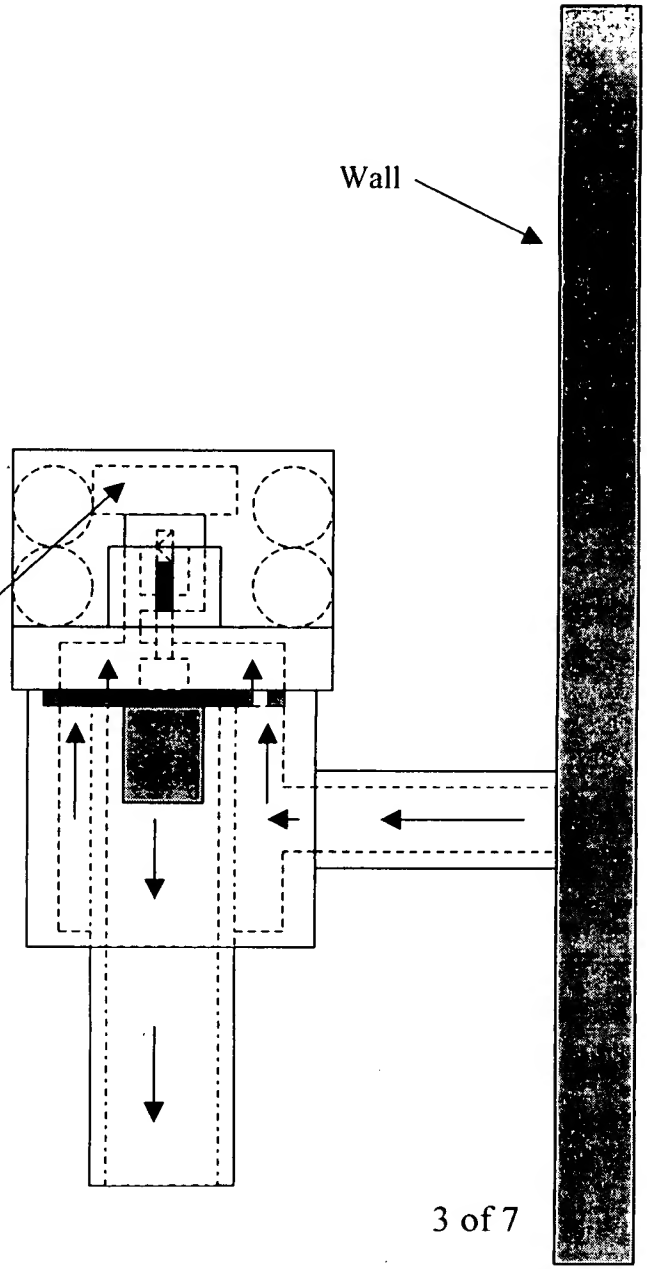
Inventors: Jerome M. Gauthier Date:
Nhon Vuong

Exposed flush valve an remote push button.



When the push button is pressed, a radio address is transmitted. Indicator lamp is off.

If the address is the same as the receiver, the receiver will activate the solenoid for a predetermined time.



Inventors: Jerome M. Gauthier Date:
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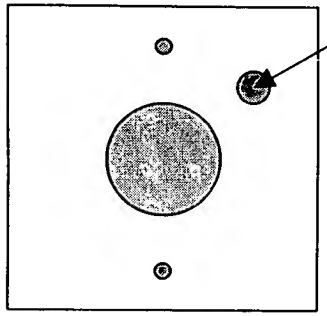
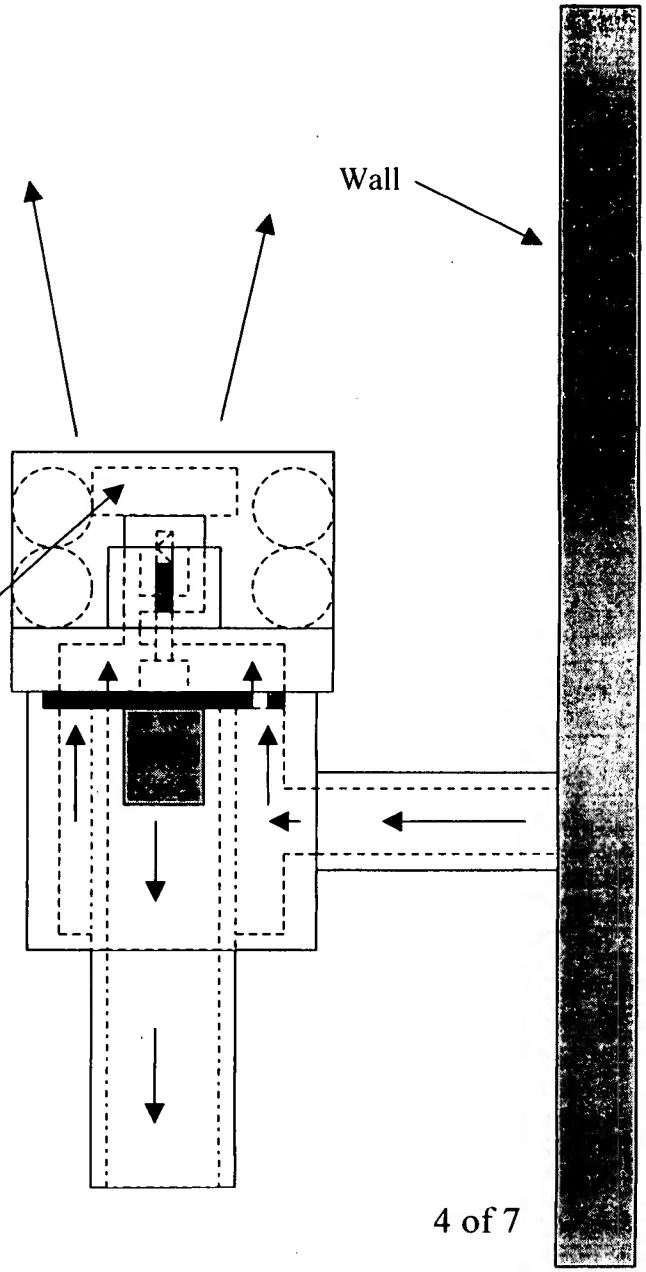


Indicator lamp

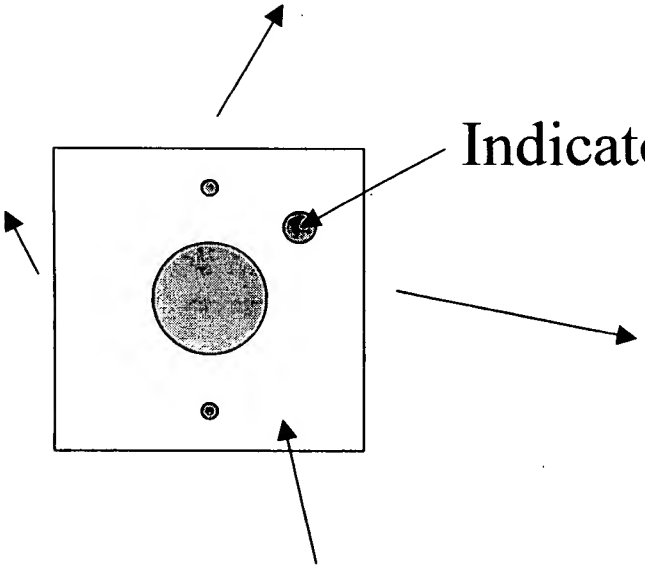


If the address is correct,
the indicator lamp will turn 'ON'.

If the address is the same as the receiver, the receiver
will activate the solenoid for a predetermined time.
The board will also send a different address to acknowledge the activation.

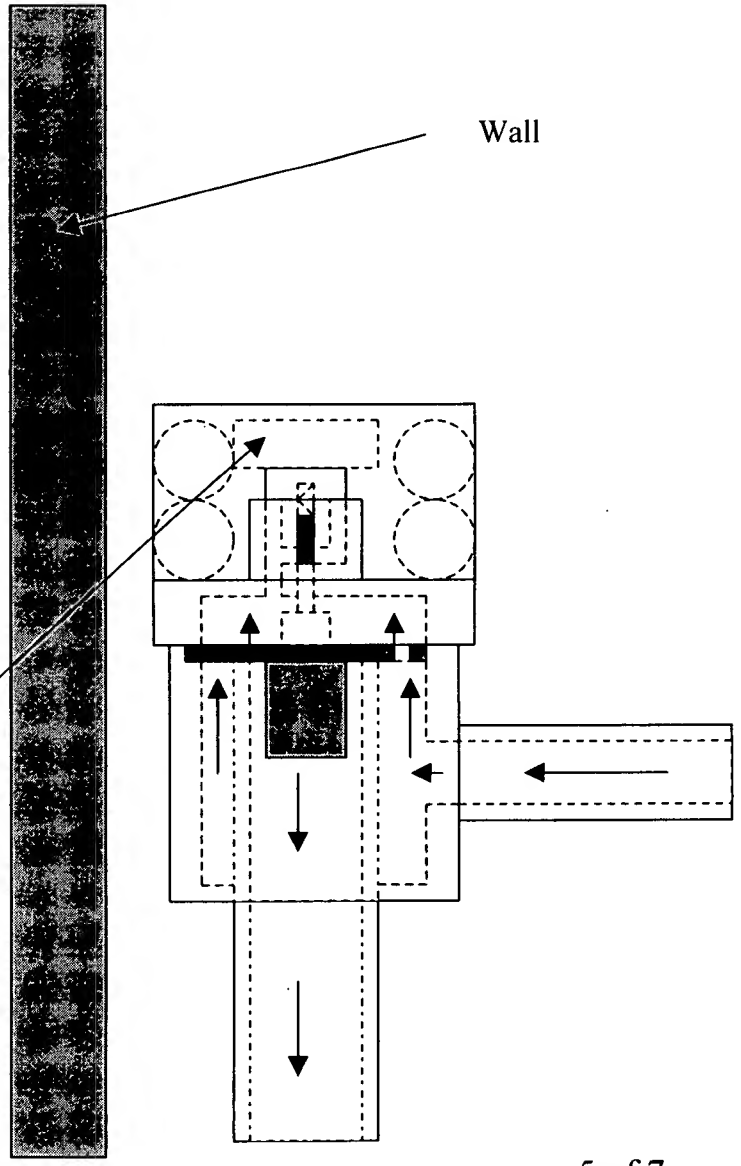
Inventors: Jerome M. Gauthier Date:
Nhon Vuong

Concealed flush valve an remote push button.



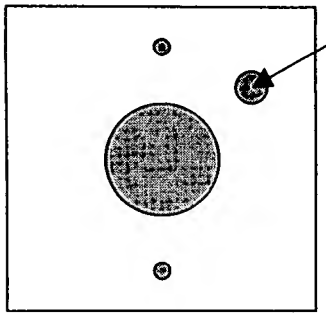
When the push button is pressed, a radio address is transmitted. Indicator lamp is off.

If the address is the same as the receiver, the receiver will activate the solenoid for a predetermined time.

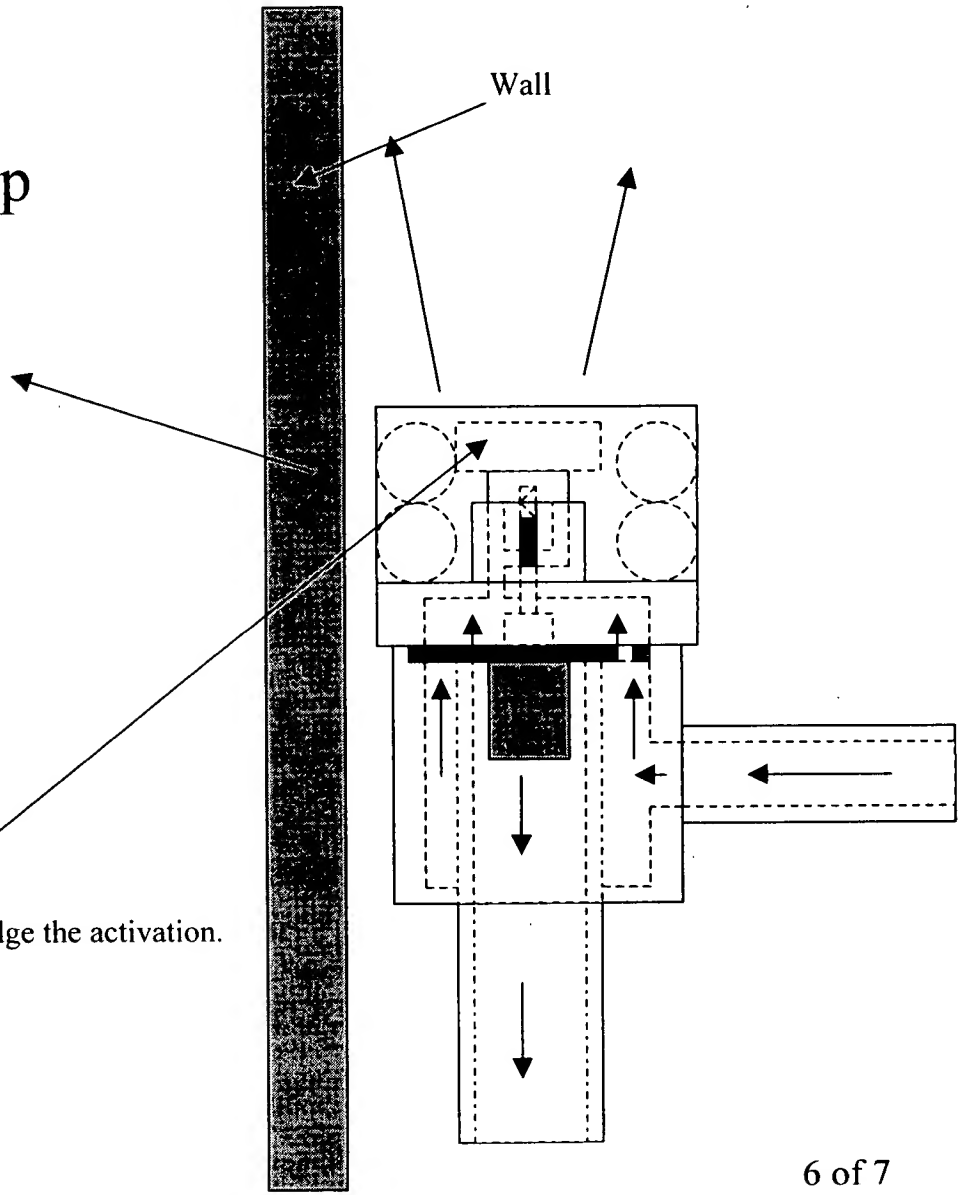


Inventors: Jerome M. Gauthier Date:
Nhon Vuong

Concealed flush valve an remote push button.



Indicator lamp



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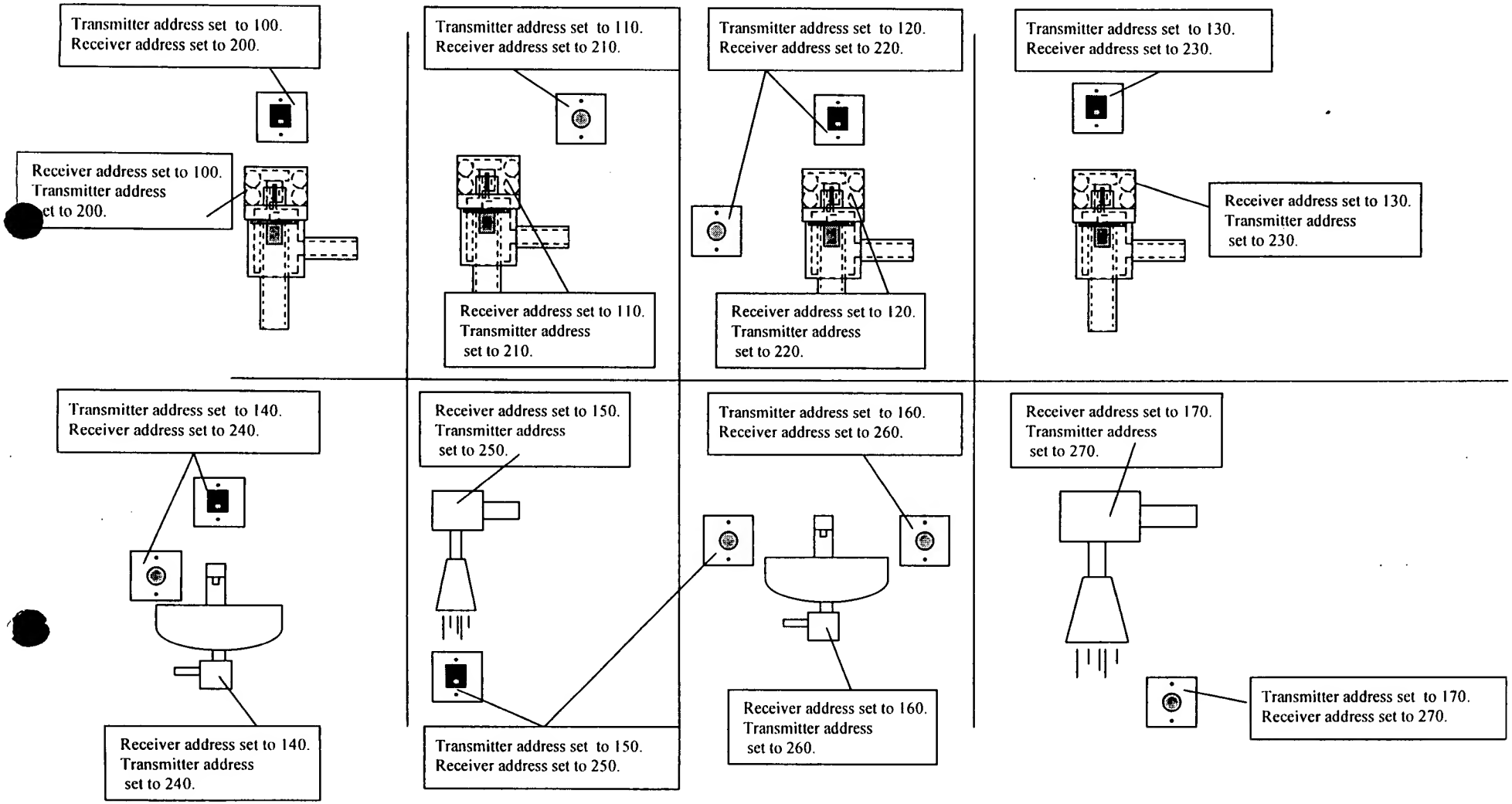
Nhon Vuong



400 Khz range .02 watts 20 milliwatts 100 FT.

Inventors: Jerome M. Gauthier Date:
Nhon Vuong